

**Fall 2023 Workshop – 50th Anniversary
Hydroelectric Productivity Committee
The Royal Sonesta Minneapolis Downtown
Minneapolis, Minnesota
September 17 – 20, 2023**

Monday, September 18, 2023

8:00 a.m. – 9:00 a.m. Breakfast

9:00 a.m. – 10:30 a.m. General Session: Executive Welcome & Keynote Speaker

10:30 a.m. – 11:00 a.m. Break

11:00 a.m. – 11:30 Noon

HP-01: Welcome and Introductions

David Sanna, United States Army Corps of Engineers (USACE), HPC Chair

This introductory session will give all committee members the opportunity to introduce themselves and their companies.

11:30 a.m. – 12:30 p.m.

HP-02: Top Performance Analysis, Methodology and Results

Gbadebo Oladosu, Oak Ridge National Laboratory (ORNL) and

John Schuknecht, HPC Data Consultant

In this session, we will examine key findings from the 2022 data cycle and reflect on changes in the business environment. This session is also intended to signal new issues and needs for the committee to focus on in the upcoming year.

12:30 p.m. – 1:00 p.m. HP-03: 2022 Top Performers – Analysis and Results including Long Term Leaders – Part I

Peer Group: 0 – 30 MW, Lakefield Generating Station, Ontario Power Generation, Mary Poulter

1:00 p.m. – 2:00 p.m. Lunch

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2:00 p.m. – 3:00 p.m. HP-04: Ignoring Your Trashrack? An Ounce of Prevention Is Worth a Pound of Cure

Eli Wilson, Seattle City Light (SCL)

Mr. Wilson will provide insights and lessons learned from a unique but costly experience of SCL when it suddenly discovered significant damage to the sole trashrack at its Diablo Hydropower Plant located on the Skagit River in Washington state. Mr. Wilson will discuss the challenges of underwater work at 130 feet of depth, cleaning of debris, navigating investigation and temporary repair under an emergency condition, and revenue impacts from a full plant outage.

3:00 p.m. – 3:30 p.m. Break

3:30 p.m. – 4:30 p.m. HP-05: Top Performers – Analysis and Results including Long Term Leaders – Part II

Peer Group: Greater than 500 MW, Oahe Dam, USACE, Gary Hinkle, Omaha District

Peer Group: Pump – Generate, Raccoon Mountain Pump Storage Plant, Tennessee Valley Authority, Matthew Brooks

4:30 p.m. – 4:45 p.m. HP-06: Day Wrap Up & Identification of Topics for Future Workshops

David Sanna, USACE and HPC Chair

In this time, a review of the day's presentations will be made and noting any ideas for a future workshop.

End of Day

Tuesday, September 19, 2023

8:00 a.m. – 9:00 a.m. Breakfast

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9:00 a.m. – 10:00 a.m. HP-07: HPC Data Guide 2023 Revisions and Questions & Answers on Data Issues

David Sanna, USACE and HPC Chair

The HPC conducted its annual data review virtually in July and the status of the action items will be reviewed. Additionally, committee members will have an opportunity to provide lessons learned so these can be incorporated into the 2024 data review meeting.

The following topics were identified by committee members in the data review wrap up meeting and will be discussed:

- *Classification of North American Electric Reliability Corporation's (NERC) program expenses. Should a New Environmental / Regulatory (ER) Cost Category be established?*
- *Does the figure (cross section drawing) on page 5 of the data guide need to be revised for facilities with long inlet waterways?*
- *Are interest expenses being reported by committee members for capital projects in Administrative (A) cost categories A2 and A3?*
- *Are dredging expenses a Maintenance 1 or 2 cost category? What are the boundaries of such work to be included in the annual cost submission?*
- *What cost category (M1 or M2) should penstock expenses be assigned?*

10:00 a.m. – 11:00 a.m. HP-08: Update on Rehabilitation Projects at Pacific Gas and Electric Company's Helms Pump Storage Plant

Jenn Scott, Pacific Gas and Electric Company (PG&E)

The Helms Pump Storage Plant was placed into commercial operation in June 1984 and has been in continuous service. The plant contains three pump/generate units with a total capacity of 1212 MW and is a major asset to California's electrical power supply. Ms. Scott will provide information on the capital projects being implemented at the plant.

11:00 a.m. – 11:30 a.m. Break

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11:30 a.m. – Noon

HP-09: Volta River Authority’s Challenge with Aquatic Weeds in Reservoirs

Dennis Sitsofe Anyomi, Volta River Authority (VRA)

VRA operates two hydropower facilities on the Volta River in Ghana that have been plagued with aquatic vegetation. Mr. Sitsofe will provide details and will solicit input from committee members about possible approaches and methods to control this growth.

12:00 Noon – 12:30 p.m. HP-10: Digital Twin Technology at Ontario Power Generation

Rob Mager, OPG

A digital twin (DT) is a digital representation of an intended or actual real-world physical product, system, or process. In this session, Mr. Mager will provide OPG’s use, and the benefits derived from DT technology within its hydropower plant asset management program.

12:30 p.m. – 1:00 p.m. HP-11: Pacific Hydro Chile’s Sediment Management in Chacayes Pond

Cristóbal González, Pacific Hydro Chile (PHC)

The Chacayes project is located on the Alto Cachapual River in the Andes Mountains and consists of diversion dams, a daily regulation pond, a desander, canals, tunnels, and a powerhouse with two-generating units with a total capacity of 111MW. Mr. González will explain the problems related to sediment buildup and the approaches PHC has undertaken to manage this issue.

1:00 p.m. – 2:00 p.m. Lunch

2:00 p.m. – 3:00 p.m. HP-12: Water Management, Debris and Aquatic Vegetation Issues & Solutions

Kevin Richards (Water Management) and Ron Hutchinson (Debris, and Aquatic Vegetation Issues & Solutions), PG&E

PG&E’s hydropower fleet is built in 16 river basins with 500 miles of shoreline. The system includes more than 100 reservoirs and 67 hydropower plants. Messers Richards and Hutchinson will provide information on the management of these assets along with the aquatic issues and solutions implemented to address them.

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3:00 p.m. – 3:30 a.m. Break

3:30 p.m. – 4:00 p.m. HP-13: USACE’s Inland Navigation Program

David Frantz, USACE

The USACE is responsible for a total of 25,000 miles of inland waterways that are operated and maintained for multiple purposes including electrical power generation. This organization is the largest owner-operator of hydroelectric power plants with 75 plants that have an installed capacity of nearly 22,000 megawatts. An overview of the USACE’s navigation program including dredging will be discussed.

4:00 p.m. – 4:30 p.m. HP-14: Building a National-scale Dataset of Fish Passage Facilities at Hydropower Developments in the United States

Gbadebo Oladosu, ORNL

Dr. Oladosu will provide a brief overview of development work by ORNL to compile an inventory of fish passage facilities that are associated with hydropower facilities.

4:30 p.m. – 4:45 p.m. HP-15: Day Wrap Up & Identification of Topics for Future Workshops

David Sanna, USACE, and HPC Chair

In this time, a review of the day’s presentations will be made noting any ideas for a future workshop.

End of Day

Wednesday, September 20, 2023

8:00 a.m. – 9:00 a.m. Breakfast

9:00 a.m. – 9:45 a.m. HP-16: Top Performers – Analysis and Results including Long Term Leaders – Part III

Peer Group: 100 – 500 MW, New Melones Dam, Bureau of Reclamation (BoR), Jay Emami

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9:45 a.m. – 10:15 a.m. Break

10:15 a.m. – 10:45 a.m. HP-17: HPC Data Presentation – Task Team Update

Clark Bishop, BoR

A survey was conducted prior to the Spring 2021 workshop seeking information on how other committee members would like to retrieve data from the HPC database. A status report of the team's activities, recommendations and proposed next steps will be provided.

10:45 a.m. – 11:15 a.m. HP-18: HPC Topics - 2024 Spring Workshop Agenda Planning, Roundtable, and Action Item Review

David Sanna, USACE, HPC Chair

In this session, the topics list in the session title will be discussed. .

11:15 a.m. – 11:45 a.m. HP-19: HPC Leadership & Business Meeting

David Sanna, USACE, HPC Chair

The HPC leadership utilizes this opportunity to discuss HPC business matters and is open to all committee members.

Mark your calendars!

Plan on attending the EUCG Spring 2024 Workshop to be held April 14-17, 2024, at the Hilton St. Petersburg Bayfront, St. Petersburg, Florida.

Adjournment